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6 April 1959

MEMORANDUM TO THE FILE

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FROM: [REDACTED]

SUBJECT: Trip Report - Visit to [REDACTED] Factory

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1. On 19 March 1959 [REDACTED] and the undersigned visited the [REDACTED] plant in Tulsa, Oklahoma, to view the prototype recorder intended for recording and playback of AS-3 or similar transmissions.

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2. We were met at the plant by [REDACTED] and [REDACTED] who is the project engineer on the modified recorder. [REDACTED] showed us the prototype. It is not complete and could not be operated at this time. It should be ready for tests by April.

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3. Basically it is a modified version of [REDACTED] M90 recorder, with a variable speed motor. Capstan drives are mechanically switched by a solenoid when changing from 30 IPS to 1.8 - 3.5 IPS variable speed range. Some components of the M90 are being relocated to make room for the low speed motor. It was noted that no provision had been made for 50 cycle operation of the unit. [REDACTED] said that this could be accomplished by changing diameter of the drive capstans (as is done in the [REDACTED] series) by attaching the proper size capstan to the drive motor shaft. In other respects the prototype recorder conforms with specifications.

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4. A conventional M90 tape transport was checked to determine ease of rewinding tape for repeating difficult portions of a transmission. With a little care this may be done by operation of the STOP, REWIND, and PLAY switches on the transport. If the tape is allowed to come to a full stop after the STOP is activated and before the REWIND is started there is no possibility of breaking the tape. An alternative, the M90 has a CUE function whereby the tape friction is decreased by releasing the jam roller and the tape may be rewound manually. This would be a slower procedure.

5. A more sophisticated (and expensive) variable speed recorder originally designed for NSA is built by [REDACTED]. This recorder has a continuously variable speed drive motor for tape

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speeds of 2 to 18 IPS. This recorder uses an internally generated frequency for motor drive and can be operated from a power source of 50 or 60 cycles and voltages between 85 to 135 volts with slight effect on capstan speed. Nomenclature of this recorder is AFSAV-75A/1/1.

[REDACTED]

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Distribution:

Original - Project File

1 - Memo to File

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